

REMARKS/ARGUMENT

In the specification, the paragraphs starting at page 8, line 21, page 10, line 17, and page 18, line 9 have been amended to correct minor editorial problems and typos.

Claims 1-7 remain in this application. Claim 8 is new. Claims 1-5 and 7 have
5 been amended to address the examiner's concerns regarding terminology, vagueness, undefined terms, lack of enabling disclosure, and lack of basis. The amendments also make it even more clear that the claims are not anticipated by the prior art. Basis for the amendments and the new claim 8 is found in the specification, including

Examiner's Objections to Specification – Antecedent Basis (objection 1, page 2)

10 Claims 1-7 were in the original application. Accordingly, Claims 1-7 form part of the original disclosure. Thus, for example, basis for the plantar surface of the rigid member is found in Claims 1-7. Additional basis is found in Figure 4C, especially when combined with the disclosure in Claims 1-7. The angular displacement member with a concave portion adjacent to a convex portion is also described in the written specification
15 at page 10, lines :2-8 and page 12, line 4 – page 14, line 7.

While disagreeing with the examiner's objections, applicant has amended the claims to remove the objected to terminology (e.g., "convex surface," "concave surface," and "foot") and to instead use terminology from the specification. Certain terms, such as "downwardly projecting," were not removed as they are self defining.

20 The various bones and joints of the human foot are well known and heavily studied by those of ordinary skill in the art of designing athletic shoes. It also is well known to those of ordinary skill in the art that: (a) a shoe is intended to encapsulate a human foot; (b) the foot goes into the shoe with the digits (toes) in the forward (or digit) section of the shoe and the heel in the back (heel) portion of the shoe; (c) that the other
25 parts of the plantar surface of the shoe correspond to the various bones and joints of the bottom of the foot. Thus the specification and claims are enabling and are not vague or indefinite to persons of ordinary skill in the art. The amendment of the claims to refer to

the sesamoid etc. portion of the plantar surface of the shoe (instead of just the “foot”) addresses the examiner’s concerns.

Examiner’s Objections to Specification – Enablement (objection 2, pages 2-4)

Claims 1-7 were in the original application. Accordingly, Claims 1-7 form part of
5 the original disclosure. Thus, for example, basis for the plantar surface of the rigid member is found in Claims 1-7. Additional basis is found in Figure 4C, especially when combined with the disclosure in Claims 1-7. The angular displacement member with a concave portion adjacent to a convex portion is also described in the written specification at page 10, lines :2-8 and page 12, line 4 – page 14, line 7.

10 While disagreeing with the examiner’s objections, applicant has amended the claims to remove the objected to terminology (e.g., “convex surface,” “concave surface,” and “foot”) and to instead use terminology from the specification. Certain terms, such as “rigid,” were not removed as they are self defining.

15 The various bones and joints of the human foot are well known and heavily studied by those of ordinary skill in the art of designing athletic shoes. It also is well known to those of ordinary skill in the art that: (a) a shoe is intended to encapsulate a human foot; (b) the foot goes into the shoe with the digits (toes) in the forward (or digit) section of the shoe and the heel in the back (heel) portion of the shoe; (c) that the other parts of the plantar surface of the shoe correspond to the various bones and joints of the
20 bottom of the foot. Thus the specification and claims are enabling and are not vague or indefinite to persons of ordinary skill in the art. The amendment of the claims to refer to the sesamoid etc. portion of the plantar surface of the shoe (instead of just the “foot”) addresses the examiner’s concerns.

35 USC 112, first paragraph Claim Rejections (rejection 3, page 4)

25 As noted above, the original claims and specification provided sufficient description to allow one of ordinary skill in the art to make the claimed shoe, especially since the original claims form part of the description. As also noted above, applicant amended his claims to remove or modify the terminology in the claims that the examiner

claimed was not described in the specification. Accordingly, applicant submits that the subject matter of his claims as amended is sufficiently described in the specification to satisfy the requirements of 35 USC 112, first paragraph.

35 USC 112 second paragraph Claim Rejections (rejection 4, page 4)

5 As noted above, the original claims and specification provided sufficient description to allow one of ordinary skill in the art to make the claimed shoe, especially since the original claims form part of the description.

As also noted above, applicant amended his claims to remove or modify the terminology in the claims that the examiner claimed was not described in the 10 specification. For example, applicant removed the “concave” and “convex” language and replaced it with terms described in the specification. Applicant also changed the references to portions of the foot to instead refer to portions of the plantar surface of the shoe corresponding to various portions of a wearer’s foot.

Accordingly, applicant submits that the subject matter of his claims as amended is 15 sufficiently definite to satisfy the requirements of 35 USC 112, second paragraph.

35 USC 102(b) and (e) Claim Rejections (rejections 5-9, pages 5-6)

Applicant’s invention provides the unexpected advantages of cooperation between an angular displacement member and a balance-thrust member, which causes at least the rear portion of the sesamoid apparatus on the front of the first metatarsal bone to be 20 elevated relative to the front portion of the forefoot thereby causing the rocking forward of the wearer’s forefoot about an axis defined by the sesamoid apparatus of the first metatarsal phalangeal joint. This forward displacement of the wearer’s center of mass reduces the breaking forces and improves linear momentum and progression. The prior art does not cause a forward shift of the wearer’s center of mass during the running cycle.

25 As far as structure is concerned, none of the cited references describe or even suggest a balance thrust member that projects downward from the plantar surface and that is located in the toe area.

Daswick (4348821) (rejection 6)

Daswick does not anticipate applicant's invention. Applicant's invention teaches a balance-thrust member at the distal portion of the plantar surface that projects downward. Daswick has no such balance-thrust member. In fact, Daswick has nothing 5 located at the distal region that projects downward from the plantar surface. Thus Daswick does not anticipate applicant's invention.

Applicant's Claim 1 is limited to a shoe having a downwardly projecting balance thrust member at the distal portion of the plantar surface. Claims 2-6 depend from Claim 1 and therefore are similarly limited. Applicant's Claims 7 and 8 are each limited to a 10 shoe having a downwardly projecting balance thrust member located forward of the tips-of-the digits portion of the plantar surface. Accordingly, none of the claims are anticipated by Daswick.

Additionally, applicant's Claim 4 claims a angular displacement member that causes the sesamoid apparatus area to be elevated with respect to the digits area. 15 Daswick describes nothing that would elevate the sesamoid apparatus area relative to the digits area, another reason Daswick does not anticipate applicant's Claim 4.

Applicant's Claim 3 claims a balance thrust member defining an axis of rotation of the foot forward of the wearer's foot. Daswick describes no balance thrust member that defines an axis of rotation of the shoe forward of front tip of the shoe, another reason 20 Daswick does not anticipate applicant's Claim 3.

Applicant's Claims 2, 3, 4, 7, and 8 also claim an angular displacement member located below the sesamoid apparatus of the first metatarsal phalangeal joint portion of the plantar surface. Daswick does not describe such an apparatus, another reason Daswick does not anticipate applicant's Claims 2, 3, 4, 7, and 8.

25 A comparison of Daswick to the claims as amended shows that Daswick also does not anticipate or describe several other elements and limitations

Whatley (2002/0026730) (rejection 7)

Whatley teaches a shoe designed to increase the effort used to walk or run, for the purpose of developing the muscles of the leg and foot, essentially by making the motion take more energy. Applicant's invention has the opposite effect, i.e., it reduces the 5 amount of energy used and lost, by increasing the percent of expended energy used for forward motion.

Whatley also causes and allows the wearer to rock back and then forth from the vertical, whereas applicant's invention causes the wearer to rock forward from the vertical. Whatley describes a convex rocking surface, essentially a semi-cylinder, placed 10 underneath the front portion of the foot. The placement is such that the wearer is forced to climb over the semi-cylinder on each step. The placement is also such that the center of gravity does not move forward until the end part of the walking or running step. Applicant's invention causes the wearer to be constantly in a leaning forward position and moves the center of gravity forward during the entire running motion.

15 Whatley does not anticipate applicant's invention. Applicant's invention teaches a balance-thrust member at the distal portion of the plantar surface that projects downward. Whatley has no such balance-thrust member. In fact, Whatley has nothing located at the distal region that projects downward from the plantar surface. Thus Whatley does not anticipate applicant's invention.

20 Applicant's Claim 1 is limited to a shoe having a downwardly projecting balance thrust member at the distal portion of the plantar surface. Claims 2-6 depend from Claim 1 and therefore are similarly limited. Applicant's Claims 7 and 8 are each limited to a shoe having a downwardly projecting balance thrust member located forward of the tips-of-the digits portion of the plantar surface. Accordingly, none of the claims are 25 anticipated by Whatley.

Applicant's Claim 3 claims a balance thrust member defining an axis of rotation of the foot forward of the wearer's foot. Whatley describes no balance thrust member that defines an axis of rotation of the shoe forward of front tip of the shoe, another reason Whatley does not anticipate applicant's Claim 3.

A comparison of Whatley to the claims as amended shows that Whatley also does not anticipate or describe several other elements and limitations

Alexander (WO 92/14372) (rejection 8)

Alexander's invention relates to the bottom surface of a safety work boot. In 5 Alexander, the bottom surface of the boot is basically flat (other than grip channels) with the heel slightly higher than the instep and digits, designed to keep the foot flat . In applicant's invention, the bottom surface of the shoe is designed to force the wearer to lean forward onto the front of the foot in a falling forward position.

Alexander does not anticipate applicant's invention. Applicant's invention 10 teaches a balance-thrust member at the distal portion of the plantar surface that projects downward. Alexander has no such downwardly projecting balance-thrust member. Alexander only shows a corrugated grip sole that actually tapers toward the toe. Thus Applicant does not anticipate applicant's invention.

Applicant's Claim 1 is limited to a shoe having a downwardly projecting balance 15 thrust member at the distal portion of the plantar surface. Claims 2-6 depend from Claim 1 and therefore are similarly limited. Applicant's Claims 7 and 8 are each limited to a shoe having a downwardly projecting balance thrust member located forward of the tips-of-the digits portion of the plantar surface. Accordingly, none of the claims are anticipated by Alexander.

20 Additionally, applicant's Claim 4 claims a angular displacement member that causes the sesamoid apparatus area to be elevated with respect to the digits area. Alexander describes nothing that would elevate the sesamoid apparatus area relative to the digits area, another reason Alexander does not anticipate applicant's Claim 4.

Applicant's Claim 3 claims a balance thrust member defining an axis of rotation 25 of the foot forward of the wearer's foot. Alexander describes no balance thrust member that defines an axis of rotation of the shoe forward of front tip of the shoe, another reason Alexander does not anticipate applicant's Claim 3.

Applicant's Claims 2, 3, 4, 7, and 8 also claim an angular displacement member located below the sesamoid apparatus of the first metatarsal phalangeal joint portion of the plantar surface. Alexander does not describe such an apparatus, another reason Alexander does not anticipate applicant's Claims 2, 3, 4, 7, and 8.

5 A comparison of Alexander to the claims as amended shows that Alexander also does not anticipate or describe several other elements and limitations

Spronken (4425721) (rejection 9)

10 In Spronken, the bottom of the shoe slopes up sharply toward the toe area, thereby making the digits portion strike the ground substantially later than in a standard shoe, if at all. Applicant's invention has a downwardly projecting balance-thrust member in the front toe area, causing the digits to strike the ground sooner than in a standard shoe. Thus Spronken teaches away from applicant's invention.

15 Spronken does not anticipate applicant's invention. Applicant's invention teaches a balance-thrust member at the distal portion of the plantar surface that projects downward. Spronken has no such downwardly projecting balance-thrust member. Spronken actually shows the opposite – a sloped upward area at the front of the toe area. Thus Spronken does not anticipate applicant's invention.

20 Applicant's Claim 1 is limited to a shoe having a downwardly projecting balance thrust member at the distal portion of the plantar surface. Claims 2-6 depend from Claim 1 and therefore are similarly limited. Applicant's Claims 7 and 8 are each limited to a shoe having a downwardly projecting balance thrust member located forward of the tips-of-the digits portion of the plantar surface. Accordingly, none of the claims are anticipated by Spronken.

25 Applicant's Claim 3 claims a balance thrust member defining an axis of rotation of the foot forward of the wearer's foot. Spronken describes no balance thrust member that defines an axis of rotation of the shoe forward of front tip of the shoe, another reason Spronken does not anticipate applicant's Claim 3.

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A comparison of Spronken to the claims as amended shows that Spronken also does not anticipate or describe several other elements and limitations

Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

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Respectfully Submitted



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Signature

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